

Office Action dated April 15, 1996 which the Examiner was kind enough to discuss with applicants' attorney.

The Examiner has continuously asserted throughout the prosecution of this case, that a claim covering the product of the present invention should be supported by a showing that applicants' product is different from the compositions disclosed in the prior art.

As a result, Dr. Angelopoulos performed a series of experiments in which she obtained data that establish conclusively that the composition of the present invention is different in kind rather than degree from the prior art compositions. These data, establishing the difference, were embodied in a Declaration under 37 C.F.R. § 1.132 submitted August 15, 1996. To further emphasize the difference, Applicants' attorney and Dr. Angelopoulos brought a video tape to the interview with the Examiner to visually demonstrate that the only circumstance under which one can the product as claimed is by blending a first solution comprising a Lewis base electrically conductive polymer in undoped form in an first organic solvent with and a second solution comprising a Lewis acid polymer dopant in a second organic solvent. The tape demonstrates other combinations of mixing the polymers resulting in a precipitate. The present invention does not form a precipitate upon mixing. Due to the unavailability of a VCR machine the tape could not be shown at the interview. Applicants reserve the right to submit the tape at a mutually convenient later date for viewing by the Examiner.

At the interview the Examiner reviewed and discussed the content of the claims in the case. Applicants' attorney emphasized that the prior art does not disclose the blending of the electrically conductive polymer and the polydopant both in the liquid state so that no precipitate is formed.

In reviewing each of United States Patents 4,933,106 to Sakai et al., 4,940,517 to Wei, 5,068,060 to Jen et al. or 4,771,111 to Tieke et al. all cited by the Examiner and considered by the Primary Examiner during the interview, Applicants' attorney pointed out that Wei et al., Jen et al., Tieke et al. or Li et al. alone or in combination, do not teach combining a polymer in undoped form in a solution with a dopant which is in another solution (of the same or different solvent), the two polymer-

containing solutions are then mixed together to form a doped polymer in combined solution. The references noted teach polymerizing the undoped monomer to a polymer in a solution containing the dopant. After polymerization, the resulting doped polymers resulting from each of the references are not soluble; on the contrary, they precipitate out of solution.

The inventor, Dr. Angelopoulos, who attended the interview and who ran the experimental tests embodied in the aforementioned declaration and the video tape noted above, has been involved in the science and technology associated with conductivity of polymers for the past ten years. The data that she developed establish that there is a difference in the structure between the blend of the present invention and the structure of the polymers disclosed in the prior art cited above.

The Examiner contends that the compositions of the present invention are obvious from the specific compounds disclosed in the prior art. Applicants attorney and Applicant emphasized at the interview that persons skilled in the art of conducting polymers, know that the processing of constituent polymers in the blend has a significant impact on the properties of the constituent polymers, including their solubility conductivity, optical properties, etc. As a result, polymers that possess identical nomenclature, in fact are different and have different properties.


Based upon research by Dr. Angelopoulos, as stated in her declaration, it is the molecular structure that controls the properties of conducting polymers. Molecular structure includes, but is not limited to, the chain conformation of the polymer, the interchain configuration and the polymer chain packing.

The common theme present in the prior art references cited by the Examiner to Sakai et al., Wei et al. and Tieke et al. is that they all teach the *in-situ* polymerization of monomers such as aniline, pyrrole, etc. in the presence of an electrolyte such as a polyacid. Applicants' distinguishing feature is the use of a liquid conductive compatible polymer blend composition.

The arguments submitted in prior responses and during the interview presented to the Examiner with respect to this case are hereby incorporated by reference herein.

In view of the modifications to the claims and based upon the arguments submitted at the interview and submitted herewith, allowance of the claims is respectfully requested.

Respectfully Submitted,



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Date: January 7, 1997

MAILING CERTIFICATE

Date of Deposit: January 7, 1997

I hereby certify that this amendment with fee is being deposited with the United States Postal Service under 37 CFR §1.10 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, Washington, D.C. 20231

Thomas A. Beck
Person Mailing


Signature